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January 13, 1995

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William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY
DOCKET FILE COPY ORIGINAL

Re: WT Docket No. 94-148

DOCKET FILE COPY ~~EX PARTE~~

Dear Mr. Caton:

Pursuant to Section 1.1206 of the Commission's Rules, on January 12, 1995, representatives of the Fixed Point-to-Point Communication Section of Telecommunications Industry Association ("TIA") provided the attached document to Robert James, Karen Rackley and Ted Ryder of the Wireless Telecommunications Bureau. In addition, a telephone conference to discuss this document was held on the same day among Mr. James, Ms. Rackley, Mr. Ryder and the following:

- George M. Kizer, Alcatel Network Systems, Inc. and Chairman of the TIA Fixed Point-to-Point Communication Section
- Chris Hardy and Brian Downs of Comsearch
- Kam Falkenthal of BellCore
- Beth Spellicy of USWest
- Denis Couillard and Mike Shephard of Harris-Farinon
- Robert J. Miller and Jeffrey D. Jacobs of Gardere & Wynne

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If you have any questions concerning this matter, please do not hesitate to contact the undersigned.

Sincerely,


Robert J. Miller

RJM/dwt
Enclosure

cc (w/o encl.): Robert James
Karen Rackley
Ted Ryder

201816/gw03



Proposed FCC Part 101 Overview

(FCC Math: $21 + 94 = 101$)

George Kizer
Alcatel Network Systems
Dallas, Texas

USER RELATED ITEMS

- **Technical Requirements Unique to Common Carriers (CCs)**
- **Technical Requirements Unique to Private Operational Fixed Microwave Service (POFS)**
- **Temporary Authorizations**
- **Station Construction**
- **Technical Content of Applications**
- **Interference Protection Criteria**
- **Minimum Capacity and Loading Equipment Related Items**
- **Transition Period**

EQUIPMENT RELATED ITEMS

- **Equipment Authorization**
- **Antennas**
- **Transmitter Power**
- **Other**

MISCELLANEOUS

- **Sections Not Needed**
- **Errors**
- **Unnecessary Duplication**

USER RELATED ITEMS

TECHNICAL REQUIREMENTS UNIQUE TO COMMON CARRIERS

SUPPLEMENTARY SHOWING **101.713**
(Including Prior Coordination)

NOTIFICATION OF TEMPORARY OPERATION **101.717**
(Should require notification of antenna
type and height, EIRP and emission
designation)

Why are these requirements not common to POFS?

TECHNICAL REQUIREMENTS UNIQUE TO PRIVATE OPERATIONAL FIXED MICROWAVE SERVICE

**Frequency Tolerance notes, '6' and
'7' apply to POFS. They should apply
to POFS and CC or neither.**

101.107

**Frequency diversity will not be
authorized.**

101.605(r)

Why are these requirements not used for Common Carriers?

TEMPORARY AUTHORIZATIONS

Both CC and POFS users may apply for a Special Temporary Authority (101.31). However, only CCs may apply for temporary fixed operation (101.715 and 101.717).

What is the difference?

Why the difference?

Applications for Special Temporary Authority and temporary fixed operation should include showing of Prior Coordination.

STATION CONSTRUCTION

POFS operators may construct or modify (but not operate) facilities prior to receiving license (101.5(d)).

CC operators must not construct or modify facilities prior to receiving license (101.5(a)).

The above should be the same.

(Note that the CC restriction may be modified by CC Docket No. 93-2, January 6, 1993).

Time of station construction for point-to-point facilities is limited to 12 months maximum (101.63). Point-to-multipoint facilities are granted 18 months.

Technical content for POFS applications is not specified.

Technical content for CC applications is supposed to be contained in 101.21. However, none is listed.

Content should be the same for both.

Content is used to maintain frequency coordination data bases. It should contain data listed in 101.103(d)(2)(ii) as a minimum.

101.103 FREQUENCY COORDINATION PROCEDURES

101.103(d) “When required, the following frequency usage coordination procedures will apply.” How is “when required” determined? These procedures should always be required. As currently written, only Common Carriers (101.713) are required to prior coordinate.

Rules on growth channels (101.103(d)(1) and 101.103(d)(2)(xii)) seem reasonable.

Modification of license (101.57(d)) should require a showing of Prior Coordination.

Prior Coordination should be defined.

101.105 INTERFERENCE PROTECTION CRITERIA

In general, these guidelines seem reasonable.

Analog interference noise meets current standards but does not allow for relaxation if both parties consent.

Practical threshold (101.105(b)) is not defined. Does the user define this or should we use a standard such as Bulletin 10?

Section does not address resolution of interference disputes. This will be especially important with introduction of PCS.

101.105(c)(3) states requirements for applicants in frequencies listed in Section 101.605(a)(1). These frequencies are used by both CC and POFS. The section cited, however, is for POFS. Who must comply?

MINIMUM CAPACITY AND LOADING

Microwave modulation requirements are for frequencies below 15 GHz (101.141(a)) and digital only (101.141). Why not 23 GHz and why not analog?

This topic is covered in two sections, 101.141(a)(3) and 101.721. The wording is slightly different.

In the 101.721 (Common Carrier Section), additional channels will not be granted unless existing equipment capacity "...will shortly [be] exhaust[ed]...". The 101.141(a)(3) has no such limitation.

Minimum voice channels for digital systems is specified in 101.721 but not 101.41(a)(3). Few new analog systems are being installed today. Since with today's technology a voice channel on a digital system can be implemented with 8 to 64 kbits/second, the utility of this section is not clear.

Should loading requirements only apply for channel bandwidths 10 MHz and greater? Should none apply?

101.141(4) Minimum payload and traffic loading must be able to be met with commercially available equipment.

TRANSITION PERIOD

The Commission has not proposed a transition period. This is a serious oversight.

Suggest existing systems operating, or license applications pending, under Part 21 or 94 be allowed to be licensed indefinitely. This should include any expansions or modifications. However, these users should accept responsibility for eliminating any interference to a Part 101 user (subPrimary status).



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EQUIPMENT RELATED ITEMS

EQUIPMENT AUTHORIZATIONS

Type acceptance or notification is not required for portable transmitters operating with peak output power not greater than 250 mW (101.139).

There are no definitions of portable transmitter and no definition of its applicability. It appears these radios could be operated for an indefinite period of time without having to meet frequency tolerance or emission mask limitations.

Transmitters employing digital modulation techniques must effectively eliminate carrier spikes or single frequency tones in the output signal. (101.141(5)(c)).

This eliminates use of subcarriers on digital radios. There is no such limitation for analog equipment.

Antenna pattern only defined for horizontal polarization (101.3, 101.21(c)).

101.117 Antenna Polarization is not defined. Circular polarization should not be allowed (except by waiver). Only linear vertical or horizontal should be allowed.

101.115(c) Antenna standards could be improved. Should they be?

101.115(c)(10) and 101.115(d) describe use of Category A and B antennas. Their use, frequency congestion, and who pays for antenna upgrades is not clear. "The Commission may require...at the licensee's expense..." is especially vague. Which licensee is referred to? What defines the requirement?

101.113(a)(2) Transmitter Power (total or per frequency?) delivered to the antenna should not be limited to -3 dBW. The EIRP of Table in 101.113(a) should apply.

101.143 Minimum path lengths formula appears appropriate. However, the “EIRP may not exceed” (as opposed to “shall not exceed”) is weak.

Under the proposed rules (101.57(d)(10) and 101.143(b) Note) ATPC may not be used. See Introduction, paragraph 18. Automatic Transmitter Power Control . ATPC must be allowed.

101.113(a) EIRP is power per frequency. This should be per frequency per polarization.

Station record keeping has been eliminated. How will power (and other important equipment parameters) be monitored?

Heterodyne microwave radio systems (101.107(b)) require the same receiver tolerance as transmitters to achieve minimum end to end frequency shift (final frequency tolerance). Heterodyne operation should be restricted to wide channels (20 MHz or greater) due to inherent frequency offset.

Should the same standards applied to typical transmitters be applied to active repeaters (especially spectrum mask over the full operating range)? Should adjacent channels be protected from fade induced noise?



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MISCELLANEOUS



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SECTIONS NOT NEEDED

Modulation Efficiency

101.141(a)(1)

Modulation Requirements

101.709

Transmitter Power

101.705

Paragraph 101.705 references non-existent paragraph 101.113(b)

Paragraph 101.139(f) references non-existent Paragraph 101.139 (should reference 101.141)

Paragraph 101.103(d)(2)(xi), term "carriers" should be "operators"

Subpart I titled "Point-to-point Microwave Radio Service." Subpart H is also a point-to-point microwave radio service. Subpart I should be titled "Common Carrier Microwave Services."

101.103(d)(2)(ii) "gain" should be added to "Transmitting antenna" data. "or certified" should be added between "provided" and "by" on "Receiving antenna" line.

101.3 Definition of "Point-to-point microwave radio service" is limited to common carriers. It should also apply to private operational fixed service.

Subpart J Index and actual paragraphs do not match.

UNNECESSARY DUPLICATION

FREQUENCIES	101.101	101.605	101.703
BANDWIDTHS	101.607	101.707	
CHANNEL LOADING	101.141(a)(3)	101.721	
TRANSMITTER POWER	101.113	101.705	
PRIOR COORDINATION	101.103(d)	101.713	

- **User Specific Technical Requirements**
- **Temporary Authorizations**
- **Station Construction**
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